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RESURRECTION OF THE RED-LEGGED BLACK DUCK.

BY WILLIAM BREWSTER.

As Dr. Dwight saw fit to remove the button from his foil before attacking the Red-legged Black Duck and me, its devoted champion, in 'The Auk' for October, 1909, I feel free to defend both the bird and myself with a similarly naked weapon. If by so doing I am fortunate enough to prick my formidable adversary here and there between the joints of his coat of mail he will remember that "faithful are the wounds of a friend" and perhaps will value them accordingly. He has indulged in no little keen but perfectly good-natured fun and satire at my expense, and at that of some of my ornithological beliefs. I shall endeavor to repay him, as best I may, in his own coin, with perhaps some accrued interest added. But first I would have it distinctly understood, both by him and by every one else, that nothing in what I am about to say is intended to express, or even to imply, the least doubt of the sincerity of any of his statements or the slightest disrespect for his scientific opinions.

The article just referred to is entitled "The Singular Case of the Black Duck of North America." This is dealt with by Dr. Dwight in a style so terse and masterful as to recall Julius Cæsar's laconic but all-embracing message, *veni, vidi, vici*. The matter is finally disposed of in the following decisive and uncompromising terms: —

"The evidence shows that all young birds, both in Canada and along the Atlantic Coast of the United States, have brownish legs, while breeding adults from the same localities have red ones. Under these circumstances the 'Red-legged Black Duck' as a subspecies does not appear to have a leg left to stand on — not even a red one. . . . Now at last after much expenditure of energy the Black Duck (*Anas rubripes*) remains an undivided species ranging over eastern North America."

That the "expenditure of energy" here mentioned has been largely on my part and not at all on that of the Black Duck is indicated by a preceding passage in which reference is made to two of my articles. Dr. Dwight advises his readers to consult them but does not himself directly discuss any of the facts and evidence they

contain. Apparently he thought that this would be a needless waste of more "energy," feeling assured, no doubt, that the weight of his own evidence and opinion would be considered sufficient to dispose of mine. Although betraying no uncertainty on this point he is evidently undecided as to whether I should be graciously pardoned or severely rebuked, for having promulgated ornithological heresy. At first he inclines towards the former course, pointing out that up to the time when his own article appeared some facts had "been missing and others misinterpreted." In another connection he pays me a graceful if qualified compliment by asking: "If an ornithologist of Mr. Brewster's ability can go astray in his conclusions what may not the rest of us do?" In still another he is generous enough to concede to "how easy it was to take the wrong path." But in the end a stern sense of duty prevails over consideration of mercy and friendship, prompting him to say unflinchingly that "the episode should be a warning object lesson for all describers to take to heart." Thus, like some poor crow, shot and hung up in a cornfield to keep others of his wanton tribe from molesting the precious grain, am I singled out and conspicuously branded to serve as a wholesome example to the ever increasing horde of reckless describers. If this fate seems somewhat hard, however well-deserved, I may at least console myself by the reflection that the remainder of my life is in a way provided for and not likely to be passed wholly in vain.

But is Dr. Dwight really justified in claiming so confidently that he has proved his contention and disproved mine? Would it not have been wiser, and also more nearly in accord with accepted usage, had he contented himself with presenting his evidence and formulating his conclusions without assuming the right to decide the case irrevocably and to publicly reprimand me, however temperately and considerately, for having taken a view of it differing from his own? Statements as positive and unqualified as some that he has made should certainly be backed by evidence sufficiently strong and convincing to amount to absolute and complete proof; otherwise they are not conclusive but, to a greater or less degree — according to the value and definiteness of the evidence — expression of mere personal opinion.

After citing the characters which I had ascribed to the Red-legged

Black Duck — giving them, however, in his own terms and in nearly inverse order, and omitting altogether one which I had placed almost at the head of the list and to which I continue to attach much importance — Dr. Dwight presents his own evidence with which I will now proceed to deal as briefly as possible. In the first place he says that by skinning and dissecting “fully fifty specimens representing many localities, north and south, besides examining dozens of others shot by friends or found hanging in the markets” he has satisfied himself that the differences which I have considered of subspecific significance “are exactly the ones that distinguish old birds from young whether they occur in the United States or in Canada.” “A series selected from many fresh specimens sent me [him] from Long Island, New York, shows that the Black Duck, like many of the other ducks, slowly passes from the juvenal into the first winter plumage, a change in the color of the feet and bill taking place at the same time. The feet of grown young birds, at first olive brown, become gradually reddened, and finally in the spring they are of nearly as bright a red as that of the adults, while the dusky bill brightens to greenish and then to yellow-green or yellow. . . . Once the adult colors of the soft parts are attained they are never lost,” the bill of the adult being “at all seasons of the year a bright greenish yellow and the feet a coral red, these colors dulling only a trifle after the breeding season.” While some of the young resemble adults, in respect to the color of the feet and bill, “as early as January” others “are still dull in April,” and “a very few laggards in vitality seem to remain immature during their first year.” Immediately following these positive statements and intended, apparently, to show on precisely what grounds they were based — since no other evidence is mentioned — is the assertion that “The bones, the trachea and larynx and the sexual organs proclaim approximately the age of specimens carefully examined.” This is quite true in regard to young birds not more than five or six months from the nest; but that it is equally true with respect to those which have nearly or quite completed the first year of their existence I am not at present prepared to believe, although my personal experience in comparing the bones, sexual organs and other internal parts of birds of many different kinds has perhaps been quite as extensive as that of Dr. Dwight. The matter has always interested me, and

during the thirty or more years when I was actively engaged in collecting birds I lost no opportunity of ascertaining by dissection, whenever possible, the approximate ages of my specimens. With those taken in summer and autumn there was seldom any trouble but by midwinter I found it difficult, and by early spring practically impossible, to decide with certainty as to whether a bird was more or less than one year old. I was accustomed to use a strong lens (but never, I will confess, a microscope), and to give attention to every detail of structure which I found available as a test of age. Hence my skepticism with regard to Dr. Dwight's confident claim. Nor has this, moreover, received the positive endorsement of any one whom I have consulted about it. Mr. H. W. Henshaw has assured me that his experience in determining the ages of birds by dissection has been closely similar to my own. Dr. C. Hart Merriam writes me that he does "not know any way by which the age of a duck killed in winter may be positively determined." Dr. Leonhard Stejneger that he is "not in a position to either deny or affirm Dr. Dwight's assertion." Mr. F. A. Lucas that he is "unable to say whether or not it would be possible to speak positively as to" the ages of ducks taken in winter "after an examination of the bones," although he has found that "in many of our small birds the back of the skull does not ossify so rapidly as the rest of it and in most cases one can usually tell whether a bird is a year old or more." Some of these statements are accompanied by others, equally qualified or non-committal, to the effect that thorough cleaning of an entire skeleton, microscopic examination of some of the parts of the bony structure, or minute examination of the generative organs and their tissue, might reveal characters by which a bird less than a year old could be identified as such. Although chiefly negative in character this testimony establishes one interesting and rather significant fact, viz., that some of the most eminent and experienced ornithologists in this country are still in ignorance or doubt about a matter to which they must have given more or less attention and concerning which Dr. Dwight lays claim to definite and exact knowledge that has escaped their ken. If his age tests be really trustworthy he is to be credited with exceptional acumen for discovering them; but if, on the other hand, they should prove to be unreliable he will have shown himself oblivious to elements of

uncertainty which should not have been overlooked or ignored. Thus he would seem to have placed himself in a position which makes it desirable if not imperative for him to describe fully and clearly the precise methods of dissection which he is accustomed to follow and the resulting proofs of age and immaturity on which he so implicitly relies. When he has done this it will be easier to judge whether his interpretation of the color variations in Black Ducks is or is not literally correct.

It is considered legitimate, I believe, to turn the guns of an opponent against his own fortifications provided one can make such use of them. If, then, I may be permitted to restrict Dr. Dwight's account of the progressive color changes in the bill, legs and feet of Black Ducks to the form *rubripes* it will be of direct service to me. For if, as I am quite ready to believe — having no grounds for maintaining the contrary — the legs and feet of young *rubripes* are not much more strongly reddish in autumn and early winter than are those of young *tristis*, and if the former bird does not acquire the full coloring of these parts until he is nearly or quite one year old, it is easy to account for the undeniable large percentage of autumnal and winter specimens which seem to be intergrades between these races by assuming that very many of them are immature representatives of *rubripes*. This, of course, is in the nature of a tentative and possibly untenable proposition. Not so, however, with the moral which I propose to draw from another of Dr. Dwight's statements already quoted and expressed in the following words: "Once the adult colors of the soft parts are attained they are never lost." This assurance, coming from one who speaks with such confidence and authority, is peculiarly welcome. For it encourages me to believe that a doubt, which I have hitherto entertained, may be unfounded and a claim, on which I have hesitated to insist, justified. The doubt has been as to whether fully mature Black Ducks, showing bright coral red legs and feet in late autumn, winter and early spring, may not afterwards have these parts dull colored in late summer and early autumn — the seasons of "eclipse" plumage with so many of the *Anatinae*. The claim — directly affected, it will be perceived, by the doubt — is that if no such retrogressive change ever takes place the apparently undisputed fact that Black Ducks with conspicuously red legs are wholly absent

from New England during the earlier part of the shooting season in autumn, and not found in any numbers much before the middle of October, affords the strongest kind of presumptive evidence that *rubripes* is a good subspecies. The very earliest date given by Dr. Townsend for its autumnal appearance in Essex County, Massachusetts, is September 21. It was represented by only seven specimens among the two hundred and sixty birds sent to Faneuil Hall Market in Boston from this region between September 21 and October 3, 1904, and examined for Dr. Townsend by that excellent authority on such matters, Mr. John H. Hardy, Jr. Of the unstated but presumably considerable number of specimens received between September 1 and 21 of that year Mr. Hardy referred *all* to "the smaller form" (*i. e., tristis*). Equally significant and convincing is the testimony relating to this point furnished by Dr. J. C. Phillips, who has a shooting stand at Wenham Lake, in Essex County, where he has given close attention to the migrations of water fowl for a number of years. He writes me as follows (under date of March 24, 1910) in response to my enquiry as to when the Red-legged Ducks appear there in autumn:—

"I have been through all my records for Wenham and find the following dates:—

September 29, 1904.	One Red-leg Duck; weighs 2 lbs. 9 oz.
October 3, 1907.	" " " " " 3 "
" 9, 1906.	" " " " "

These are very early dates or they would not have been noted.... The large, heavy-feathered ducks [*i. e., rubripes*] are not common before October 20." He adds: "The more I ponder on the subject, the more I become satisfied that there are two types of ducks, but I don't think that the red legs are the whole story.¹ While at Currituck last Christmas, I was very much struck by the pre-

¹ Although I continue to believe that the coloring of the legs and feet is conspicuously red in typical examples of *rubripes* and essentially brown or brownish in those of the bird I have called *tristis* I should not be greatly surprised to find that this character is more or less inconstant and unreliable. Even should it prove quite worthless there would remain the obvious differences in size and plumage to which I called attention in the original description of *rubripes*. Dr. Phillips appears to regard them as racial, not age, differences and Col. John E. Thayer assures me that he is of the same opinion. As Dr. Dwight said little or nothing about them in his paper I do not feel called upon to restate or to rediscuss them in the present connection.

ponderance, in our bags, of very large 'winter' ducks. I weighed a large number and many went to 6 lbs. to the pair. I shot numbers [of Black Ducks] in this same region twelve years ago and then we were always surprised to see any of these big ducks. . . . Gunners have spoken to me of the same thing, that is, a change in the type of Black Duck during the last few years at Currituck. . . . At the same time, up here in Wenham, we don't get the September flight of small ducks [*i. e., tristis*] that we used to get along from 1900 to 1905, and yet there are full as many late November and December Black Ducks [*i. e., rubripes*] around the ponds. Can it be that the big duck is taking the place of the smaller one, he being perhaps a shyer bird with more distant breeding grounds, and that the small duck has suffered more during the general decrease in water-fowl."

At Lake Umbagog I have never met with *rubripes* at any date earlier than September 27 (1889), although during the twenty or more years when I was accustomed to spend the greater part of every autumn there I must have examined fully two hundred freshly killed Black Ducks shot in September, to say nothing of the thousands of living birds seen at close range under conditions which enabled me to make sure of the coloring of their legs and feet. Of the specimens actually taken very many were shown by dissection to be more than one year old. That no one of them had passed the maximum age when, according to Dr. Dwight, *all* Black Ducks assume the bright red coloring of the legs and feet, never afterwards to part with it, is obviously improbable if not, as I believe, simply inconceivable.

Another fact of some apparent significance is the tendency shown by Black Ducks having red legs to keep together; either wholly by themselves, in small flocks, as I have repeatedly known to happen in late autumn at Lake Umbagog, or in pairs or clustering groups, when mingling with brown-legged birds, as I have witnessed in early spring in Massachusetts. An interesting instance of the latter kind came under my notice in March, 1909. On the 16th of the month Mr. Purdie and I found eighty-four Black Ducks assembled at Fresh Pond where all but a few, swimming in open water, were standing on a great raft of floating ice, basking in the morning sun. With the help of its clear rays and of a strong glass I was able to satisfy myself that there were only fifteen representatives of *rubripes*

among the total number on the ice — a surprisingly small proportion of “adults” to “immature” birds if Dr. Dwight’s opinions are correct. All the birds satisfactorily seen had legs either bright red — almost as deep and pure as that of red sealing wax — or dull brownish, there being no indication of intergradation in this respect. Four red-legged birds stood together in one place; in another there were five with a single brown-legged bird; in still another four, represented by two mated pairs separated by a space of only a few yards. The remaining two were far removed from the others and among brown-legged birds. Although most of these ducks were unquestionably wild ones, about to migrate to breeding grounds lying further north, a few may have strayed from some of the park ponds in Boston or Brookline where miscellaneous collections of semi-domesticated water-fowl are kept. I mention this slight uncertainty partly to guard myself against the possible accusation of inconsistency which might be suggested by a criticism that I shall make presently of certain observations of park water-fowl by Dr. Dwight. It can scarcely fail to be recognized, however, that the two cases are not parallel, or to be admitted that even if a few of the birds seen at Fresh Pond were not really wild, the fact has little or no obvious bearing on the use I have made of the evidence they furnished. Where I refer to “pairs” I mean that each of these consisted of a drake and a duck, not of two birds of unknown sex. It is perfectly easy — at least in spring — to distinguish male from female Black Ducks when mated birds are standing together on ice or land and not too far off; for the males are decidedly larger than the females and also appreciably different in form and carriage.

Although Dr. Dwight is given to insisting that no one unprovided with full series of birds taken during the breeding season, in their summer haunts, should presume to pass upon questions in which the value or significance of differences of color or markings is involved, his paper on Black Ducks lacks satisfactory assurance that, with the exception of a single specimen, any of the birds he mentions were obtained in localities where they had certainly settled to breed. He apparently admits, and at the same time defends, this violation of his favorite rule by pointing out that “There are many difficulties to be overcome in obtaining breeding specimens which of course

would settle the question at once. The males become exceedingly shy and difficult to find in the breeding season and nobody wants to slaughter brooding females even if nests be found." He goes on to say, however, that "before spring shooting was abolished some years ago on Long Island, New York, a number of freshly killed birds were sent me that scarcely needed dissection to prove them breeding birds. They were shot at various dates in April and all had red legs." To those unfamiliar with certain known facts of migration the evidence furnished by the two sentences last quoted may seem important, but that an ornithologist of Dr. Dwight's knowledge and experience can attach any special value or significance to it is indeed surprising. He must know, of course, that in April — or May, for that matter — thousands of birds whose *individual* summer homes lie further to the northward may be found lingering in the New England and the Middle States at dates when others of the same or of closely allied species are sitting on their nests and eggs in the same neighborhood. Indeed it is unsafe to assume that the mere presence of migratory birds of any kind at localities not near the extreme northern limits of their summer ranges, affords any proof that they are breeding in such localities unless they occur there within that limited period in early summer when the waves of migration are wholly at rest. In the case of ducks, moreover, physical evidences of "breeding condition," such as Dr. Dwight may be assumed to refer to in what he says of his Long Island specimens, have apparently little or no real significance of the kind he gives us to understand. For although Goldeneyes and Goosanders do not lay their eggs in northern New England before late April or early May and are not known or suspected to ever breed anywhere in Massachusetts, they have been seen copulating in March near Boston and in the waters about Cape Cod.

Perhaps, after all, Dr. Dwight is better informed about some of these matters than the passages just quoted would seem to imply, for he follows them by the admission that "it was not until the present year that I secured the last link required in my chain of evidence." This, it appears, was furnished by a freshly-killed bird shot "on Long Island, June 11, 1909." It had "the red legs and other characters supposed to belong to the northern 'form' alone" and "evidently was recently mated." Hence Dr. Dwight insists that

"it should set at rest any lurking belief in the subspecific distinctness of *rubripes*." He calls "attention to the fallibility of trained gunners when a question of scientific importance is at stake," adding: "The very man who shot my June bird had previously assured me that the summer birds of Long Island did not have red legs." Dr. Dwight then goes on to say that he has "noticed, without a glass, that the wild birds breeding about the Central Park lakes in New York City have red legs, but such evidence, derived from semi-domesticated water-fowl, is not convincing in itself alone." Considered in the close connection in which it occurs with the passage expressing disparagement of the opinions and methods of observation of "trained gunners" this last statement is rather amusing. That a trained ornithologist, dealing with a question of scientific importance, should have made it without perceiving that so far from strengthening, it positively tends to discredit, some of his other evidence and conclusions, is not a little surprising. For, as almost everyone knows, the water-fowl now kept in such numbers and variety in or near New York, Boston, and various other large cities are, for the most part, of obscure if not unknown origin. Purchased from Sportsman's Shows or from dealers in remote parts of North America and the Old World they intermingle and probably also interbreed, producing offspring of even more uncertain antecedents than their own. Some of them are pinioned but many are not thus handicapped, having free use of their wings and unrestrained liberty, wander more or less widely, returning to the park ponds every now and then or deserting them altogether, as circumstances or inclination dictate. They often join, or are joined by, wild migrants of the same or of allied species and even occasionally mate with them it is thought — although not as yet definitely ascertained. In such collections of living water-fowl the Red-legged Black Ducks are often rather numerous represented. Their presence in them has, of course, no more significance than has that of the Wood Ducks kept in such profusion in ornamental ponds in various cities in Europe. In view of all these facts why is it not possible — or rather probable — that the "June bird" shot on Long Island came originally from some of the lakes in Central Park or the Bronx? It may even have been one of the very ducks — "wild" or "semi-domesticated," which are we to

call them? — which Dr. Dwight viewed with such satisfaction there when the momentous question as whether *rubripes* has or has not “a leg left to stand on” was perhaps still agitating his mind. Should such a suggestion be brought to the attention of the slayer of the “June bird” it would be likely to strengthen his original belief that the wild Black Ducks which occur on Long Island in summer do not have red legs. For men of his sort are apt to be tenacious of opinions based on personal experience — thereby differing from trained ornithologists.

Nothing that I have said in the course of the present article or in any previous connection should be taken to imply that I am or ever have been, absolutely assured that the Red-legged Black Duck is a good subspecies. All I claim is that the bulk of the evidence seems to point that way and more decidedly now than it did before Dr. Dwight’s article was written. As I have already explained, some of his most confident statements have given me unexpected comfort and support, although intended by him to serve a directly opposite purpose. It may be, or course, that I have made incorrect use of them and also, as he thinks, of the results of my own study and observation. But that remains to be shown, for there is obvious need of additional evidence more definite and convincing than any thus far produced before the question can be finally settled. If, perchance, it be decided against Dr. Dwight, I promise not to insist on his serving as a warning to any one. Should the spirit of charity and forgiveness, which all good Christians are supposed to cultivate and to act upon at every fitting opportunity, be expected to go further than this?